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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,467	01/03/2001	Yoshihiro Tsuchiya	826.1661/JDH	1571

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EXAMINER	
LI, ZHUO H	

ART UNIT	PAPER NUMBER
2186	

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/752,467	TSUCHIYA ET AL.	
	Examiner	Art Unit	
	Zhuo H Li	2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6-13,25,30,35,40 and 44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-13,25,30,35,40 and 44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office action is in response to the amendment filed 6/23/2004. Accordingly, claims 1-5, 14-24, 26-29, 31-34, 36-39 and 41-43 are withdrawn from the consideration, and claims 6-13, 25, 30, 35, 40 and 44 are pending for examination.

Election/Restrictions

2. Applicant's election of Group II in the reply filed on 12/24/2003 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

3. This application contains claims 1-5, 14-24, 26-29, 31-34, 36-39 and 41-43 are drawn to an invention nonelected. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 112

4. Claims 6-13, 25, 30, 35 and 40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 6, 25, 30, 35 and 40, the term "any" renders the claim vague and indefinite because the term "any" has an alternative meaning that does not positively identify the claimed limitations.

Claims 7-13 are also rejected because of depending on claim 6 containing the same deficiency.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 6-12, 25, 30, 35, 40 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (US PAT. 5,455,947 hereinafter Suzuki) in view of Kinjo et al. (US PAT. 5,701,437 Kinjo).

Regarding claim 6, Suzuki discloses a backup system for backing up a sharing medium shared by a plurality of computers (col. 4 lines 20-31) comprising a log management device (20, figure 1) for forming an entire log by gathering logs of two or more computers (col. 4 lines 46-49), and a formation device forming data at a backup start point using entire log (col. 5 lines 8-13 and lines 55-65). Suzuki differs from the claimed invention in not specifically teaching to manage original data before a write access occurs as a log when one of said plurality of computers access the shared medium to write data. However, Kinjoa teaches a dual-memory managing apparatus for performing a memory copy operation, i.e., managing original data, before a write access occurs when a write instruction is transmitted from one of a plurality of computers accessing a sharing medium to write data, thereby preventing degradation of processing capability in a memory copy mode (col. 2 lines 48-65 and col. 5 line 43 through col. 6 line 14). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Suzuki in having the log management device to manage original data before a write access occurs as a log when one of said plurality of computers access the shared medium to write data, as per teaching of Kinjo, because it prevents degradation of processing capability.

Regarding claim 7, Suzuki discloses a temporary log storage device temporarily storing each log of the plurality of computers, wherein the log management device edits each log stored in the temporary log storage device and forms the entire log (col. 4 line 58 through col. 5 line 4).

Regarding claim 8, Kinjo discloses the dual-memory management apparatus receiving an access notice, i.e., write instruction, from the computer that have accessed the sharing medium and storing a log of computer when one of the plurality of computer accesses the sharing medium, thereby forming entire log (col. 5 line 62 through col. 6 line 14).

Regarding claims 9-10, Suzuki discloses a backup storage device storing backup data of the sharing medium, wherein the log management device stores the entire log in the backup storage device (col. 10 lines 14-20).

Regarding claims 11-12, Suzuki discloses the log files storing the updated data, i.e., backup data, of the sharing medium and a log storage device storing the entire log, wherein the log management device writes the entire log over the backup data (col. 10, lines 14-28).

Regarding claims 25, 30, 35, 40 and 44, the limitations of the claims are rejected as the same reasons set forth in claim 6.

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (US PAT. 5,455,947 hereinafter Suzuki) in view of Kinjo et al. (US PAT. 5,701,437 Kinjo) as applied to claim 6 above, and further in view of Masuda et al. (US PAT. 6,226,651 hereinafter Masuda).

Regarding claim 13, the combination of Suzuki and Kinjo differs from the claimed invention in not specifically teaching the formation device referring to the entire log first and the backup data later if necessary in a case that the entire log is not written over backup data of the sharing medium. However, Masuda teaches a system in a case that the entire log is not written over backup data of the sharing medium, the formation device referring to the entire log first (col. 9 lines 6-9) and then backup data if necessary (col. 9 lines 39-41) in order to make recovery

process faster and more efficient. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of Suzuki and Kinjo in having the formation device referring to the entire log first and the backup data later if necessary in a case that the entire log is not written over backup data of the sharing medium, as per teaching of Masuda, because it makes recovery process faster and more efficient.

Response to Arguments

8. Applicant's arguments with respect to claims 6-13,25, 30, 35, 40 and 44 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Duyanovich et al. (US PAT. 5,555,371) discloses a data backup copying with delayed directory updating and reduced number of DASD access at a backup site using a log structured array data storage (abstract). Baker et al. (US PAT. 5,381,545) discloses a data processing system for managing stored data (abstract). Yanai et al. (US PAT. 5,381,539) discloses a cache management system for monitoring and controlling the contents of cache memory coupled to at least one host and at least one data storage device (col. 1 line 66 through col. 3 line 46).

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any response to this final action should be mailed to:

BOX AF

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 308-6606

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Fourth Floor (Receptionist).

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zhuo H. Li whose telephone number is 703-305-3846. The examiner can normally be reached on Tuesday to Friday from 9:30 a.m. to 7:00 p.m. The examiner can also be reached on alternate Monday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim, can be reached on (703) 305-3821.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Zhuo H. Li

Art Unit 2186

MATTHEW KIM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER